

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NUMBER 15670-029US1 SD2003-252
INTERNATIONAL APPLICATION NO. PCT/US2004/017237	INTERNATIONAL FILING DATE 1 June 2004	U.S. APPLICATION NO. (if known, see 37 C.F.R. 1.5) 10/558842
TITLE OF INVENTION Circuit Network Analysis Using Algebraic Multigrid Approach		PRIORITY DATE CLAIMED 30 May 2003
APPLICANT(S) FOR DO/EO/US Chung-Kuan Cheng and Zhengyong Zhu		
<p>Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:</p> <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a submission under 35 U.S.C. 371. 2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371. 3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below. 4. <input checked="" type="checkbox"/> The US has been elected (Article 31). 5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) <ol style="list-style-type: none"> a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau). b. <input type="checkbox"/> has been communicated by the International Bureau. c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US). 6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)). <ol style="list-style-type: none"> a. <input type="checkbox"/> is attached hereto. b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4). 7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) <ol style="list-style-type: none"> a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau). b. <input type="checkbox"/> have been communicated by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. d. <input checked="" type="checkbox"/> have not been made and will not be made. 8. <input type="checkbox"/> An English language translation of amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)). 9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). 10. <input type="checkbox"/> An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). <p>Items 11 to 20 below concern document(s) or information included:</p> <ol style="list-style-type: none"> 11. <input type="checkbox"/> An Information Disclosure Statement under 37 C.F.R. 1.97 and 1.98. 12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 C.F.R. 3.28 and 3.31 is included. 13. <input checked="" type="checkbox"/> A preliminary amendment. 14. <input type="checkbox"/> An Application Data Sheet under 37 C.F.R. 1.76. 15. <input type="checkbox"/> A substitute specification. 16. <input type="checkbox"/> A power of attorney and/or change of address letter. 17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 C.F.R. 1.821 - 1.825. 18. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4). 19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4). 		

U.S. APPLICATION NO. (if known, see 37 C.F.R. 1.5)		INTERNATIONAL APPLICATION NO.		ATTORNEY'S DOCKET NUMBER																																																																																																																																																																																											
107558842		PCT/US2004/017237		15670-029US1																																																																																																																																																																																											
20. Other items or information: Copy of International Search Report (4 pages)																																																																																																																																																																																															
The following fees have been submitted																																																																																																																																																																																															
<table border="1"> <tr> <td colspan="2">21. <input checked="" type="checkbox"/> Basic national fee (37 CFR 1.192(a))</td> <td colspan="2">\$300</td> <td colspan="2">CALCULATIONS PTO USE ONLY</td> </tr> <tr> <td colspan="2"></td> <td colspan="2">\$300.00</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">22. <input checked="" type="checkbox"/> Examination fee (37 CFR 1.492(c)) If the written opinion prepared by ISA/US or the international preliminary examination report prepared by the IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)</td> <td colspan="2">\$0</td> <td colspan="2">\$0.00</td> </tr> <tr> <td colspan="2">All other situations</td> <td colspan="2">\$200</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">23. <input checked="" type="checkbox"/> Search fee (37 CFR 1.92(b)) If the written opinion of the ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)</td> <td colspan="2">\$0</td> <td colspan="2">\$0.00</td> </tr> <tr> <td colspan="2">Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority.....</td> <td colspan="2">\$100</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB.....</td> <td colspan="2">\$400</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">All other situations</td> <td colspan="2">\$500</td> <td colspan="2"></td> </tr> <tr> <td colspan="4">Total of 21, 22 and 23 =</td> <td colspan="2">\$300.00</td> </tr> <tr> <td colspan="6"> <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing filed in an electronic medium) (37 CFR 1.492(j)). The fee is \$250 for each additional 50 sheets of paper or fraction thereof. </td> </tr> <tr> <td>Total Sheets</td> <td>Extra Sheets</td> <td colspan="2">Number of each additional 50 or fraction thereof (round up to a whole number)</td> <td colspan="2">RATE</td> </tr> <tr> <td>-100 =</td> <td>/50=</td> <td colspan="2"></td> <td>X \$250</td> <td>\$0.00</td> </tr> <tr> <td colspan="6">Surcharge of \$130 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 C.F.R. 1.492(h)).</td> </tr> <tr> <td colspan="6"> <table border="1"> <tr> <th>CLAIMS</th> <th>NUMBER FILED</th> <th>NUMBER EXTRA</th> <th>RATE</th> <th></th> </tr> <tr> <td>Total Claims</td> <td>26 - 20 =</td> <td>6</td> <td>x \$50</td> <td>\$300.00</td> </tr> <tr> <td>Independent Claims</td> <td>4 - 3 =</td> <td>1</td> <td>x \$200</td> <td>\$200.00</td> </tr> <tr> <td colspan="3">MULTIPLE DEPENDENT CLAIM(S) (if applicable)</td> <td>+ \$360</td> <td>\$0.00</td> </tr> <tr> <td colspan="4">TOTAL OF ABOVE CALCULATIONS =</td> <td>\$800.00</td> </tr> </table> </td> </tr> <tr> <td colspan="6"> <input checked="" type="checkbox"/> Applicant claims small entity status. See 37 C.F.R. 1.27. Fees above are reduced by 1/2. </td> </tr> <tr> <td colspan="6"> <table border="1"> <tr> <td colspan="3"></td> <td>SUBTOTAL =</td> <td>\$400.00</td> </tr> </table> </td> </tr> <tr> <td colspan="6">Processing fee of \$130 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 C.F.R. 1.492(i))</td> </tr> <tr> <td colspan="6"> <table border="1"> <tr> <td colspan="3"></td> <td>+</td> <td>\$0.00</td> </tr> <tr> <td colspan="4">TOTAL NATIONAL FEE =</td> <td>\$400.00</td> </tr> </table> </td> </tr> <tr> <td colspan="6">Fee for recording the enclosed assignment (37 C.F.R. 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 C.F.R. 3.28, 3.31). \$40.00 per property</td> </tr> <tr> <td colspan="6"> <table border="1"> <tr> <td colspan="3"></td> <td>+</td> <td>\$0.00</td> </tr> <tr> <td colspan="4">TOTAL FEES ENCLOSED =</td> <td>\$400.00</td> </tr> </table> </td> </tr> <tr> <td colspan="6"> <table border="1"> <tr> <td colspan="3"></td> <td>Amount to be refunded:</td> <td>\$0.00</td> </tr> <tr> <td colspan="3"></td> <td>Amount to be charged:</td> <td>\$0.00</td> </tr> </table> </td> </tr> </table>						21. <input checked="" type="checkbox"/> Basic national fee (37 CFR 1.192(a))		\$300		CALCULATIONS PTO USE ONLY				\$300.00				22. <input checked="" type="checkbox"/> Examination fee (37 CFR 1.492(c)) If the written opinion prepared by ISA/US or the international preliminary examination report prepared by the IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)		\$0		\$0.00		All other situations		\$200				23. <input checked="" type="checkbox"/> Search fee (37 CFR 1.92(b)) If the written opinion of the ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)		\$0		\$0.00		Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority.....		\$100				International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB.....		\$400				All other situations		\$500				Total of 21, 22 and 23 =				\$300.00		<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing filed in an electronic medium) (37 CFR 1.492(j)). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.						Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to a whole number)		RATE		-100 =	/50=			X \$250	\$0.00	Surcharge of \$130 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 C.F.R. 1.492(h)).						<table border="1"> <tr> <th>CLAIMS</th> <th>NUMBER FILED</th> <th>NUMBER EXTRA</th> <th>RATE</th> <th></th> </tr> <tr> <td>Total Claims</td> <td>26 - 20 =</td> <td>6</td> <td>x \$50</td> <td>\$300.00</td> </tr> <tr> <td>Independent Claims</td> <td>4 - 3 =</td> <td>1</td> <td>x \$200</td> <td>\$200.00</td> </tr> <tr> <td colspan="3">MULTIPLE DEPENDENT CLAIM(S) (if applicable)</td> <td>+ \$360</td> <td>\$0.00</td> </tr> <tr> <td colspan="4">TOTAL OF ABOVE CALCULATIONS =</td> <td>\$800.00</td> </tr> </table>						CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		Total Claims	26 - 20 =	6	x \$50	\$300.00	Independent Claims	4 - 3 =	1	x \$200	\$200.00	MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$360	\$0.00	TOTAL OF ABOVE CALCULATIONS =				\$800.00	<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 C.F.R. 1.27. Fees above are reduced by 1/2.						<table border="1"> <tr> <td colspan="3"></td> <td>SUBTOTAL =</td> <td>\$400.00</td> </tr> </table>									SUBTOTAL =	\$400.00	Processing fee of \$130 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 C.F.R. 1.492(i))						<table border="1"> <tr> <td colspan="3"></td> <td>+</td> <td>\$0.00</td> </tr> <tr> <td colspan="4">TOTAL NATIONAL FEE =</td> <td>\$400.00</td> </tr> </table>									+	\$0.00	TOTAL NATIONAL FEE =				\$400.00	Fee for recording the enclosed assignment (37 C.F.R. 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 C.F.R. 3.28, 3.31). \$40.00 per property						<table border="1"> <tr> <td colspan="3"></td> <td>+</td> <td>\$0.00</td> </tr> <tr> <td colspan="4">TOTAL FEES ENCLOSED =</td> <td>\$400.00</td> </tr> </table>									+	\$0.00	TOTAL FEES ENCLOSED =				\$400.00	<table border="1"> <tr> <td colspan="3"></td> <td>Amount to be refunded:</td> <td>\$0.00</td> </tr> <tr> <td colspan="3"></td> <td>Amount to be charged:</td> <td>\$0.00</td> </tr> </table>									Amount to be refunded:	\$0.00				Amount to be charged:	\$0.00
21. <input checked="" type="checkbox"/> Basic national fee (37 CFR 1.192(a))		\$300		CALCULATIONS PTO USE ONLY																																																																																																																																																																																											
		\$300.00																																																																																																																																																																																													
22. <input checked="" type="checkbox"/> Examination fee (37 CFR 1.492(c)) If the written opinion prepared by ISA/US or the international preliminary examination report prepared by the IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)		\$0		\$0.00																																																																																																																																																																																											
All other situations		\$200																																																																																																																																																																																													
23. <input checked="" type="checkbox"/> Search fee (37 CFR 1.92(b)) If the written opinion of the ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)		\$0		\$0.00																																																																																																																																																																																											
Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority.....		\$100																																																																																																																																																																																													
International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB.....		\$400																																																																																																																																																																																													
All other situations		\$500																																																																																																																																																																																													
Total of 21, 22 and 23 =				\$300.00																																																																																																																																																																																											
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing filed in an electronic medium) (37 CFR 1.492(j)). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.																																																																																																																																																																																															
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to a whole number)		RATE																																																																																																																																																																																											
-100 =	/50=			X \$250	\$0.00																																																																																																																																																																																										
Surcharge of \$130 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 C.F.R. 1.492(h)).																																																																																																																																																																																															
<table border="1"> <tr> <th>CLAIMS</th> <th>NUMBER FILED</th> <th>NUMBER EXTRA</th> <th>RATE</th> <th></th> </tr> <tr> <td>Total Claims</td> <td>26 - 20 =</td> <td>6</td> <td>x \$50</td> <td>\$300.00</td> </tr> <tr> <td>Independent Claims</td> <td>4 - 3 =</td> <td>1</td> <td>x \$200</td> <td>\$200.00</td> </tr> <tr> <td colspan="3">MULTIPLE DEPENDENT CLAIM(S) (if applicable)</td> <td>+ \$360</td> <td>\$0.00</td> </tr> <tr> <td colspan="4">TOTAL OF ABOVE CALCULATIONS =</td> <td>\$800.00</td> </tr> </table>						CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		Total Claims	26 - 20 =	6	x \$50	\$300.00	Independent Claims	4 - 3 =	1	x \$200	\$200.00	MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$360	\$0.00	TOTAL OF ABOVE CALCULATIONS =				\$800.00																																																																																																																																																																	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE																																																																																																																																																																																												
Total Claims	26 - 20 =	6	x \$50	\$300.00																																																																																																																																																																																											
Independent Claims	4 - 3 =	1	x \$200	\$200.00																																																																																																																																																																																											
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$360	\$0.00																																																																																																																																																																																											
TOTAL OF ABOVE CALCULATIONS =				\$800.00																																																																																																																																																																																											
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 C.F.R. 1.27. Fees above are reduced by 1/2.																																																																																																																																																																																															
<table border="1"> <tr> <td colspan="3"></td> <td>SUBTOTAL =</td> <td>\$400.00</td> </tr> </table>									SUBTOTAL =	\$400.00																																																																																																																																																																																					
			SUBTOTAL =	\$400.00																																																																																																																																																																																											
Processing fee of \$130 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 C.F.R. 1.492(i))																																																																																																																																																																																															
<table border="1"> <tr> <td colspan="3"></td> <td>+</td> <td>\$0.00</td> </tr> <tr> <td colspan="4">TOTAL NATIONAL FEE =</td> <td>\$400.00</td> </tr> </table>									+	\$0.00	TOTAL NATIONAL FEE =				\$400.00																																																																																																																																																																																
			+	\$0.00																																																																																																																																																																																											
TOTAL NATIONAL FEE =				\$400.00																																																																																																																																																																																											
Fee for recording the enclosed assignment (37 C.F.R. 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 C.F.R. 3.28, 3.31). \$40.00 per property																																																																																																																																																																																															
<table border="1"> <tr> <td colspan="3"></td> <td>+</td> <td>\$0.00</td> </tr> <tr> <td colspan="4">TOTAL FEES ENCLOSED =</td> <td>\$400.00</td> </tr> </table>									+	\$0.00	TOTAL FEES ENCLOSED =				\$400.00																																																																																																																																																																																
			+	\$0.00																																																																																																																																																																																											
TOTAL FEES ENCLOSED =				\$400.00																																																																																																																																																																																											
<table border="1"> <tr> <td colspan="3"></td> <td>Amount to be refunded:</td> <td>\$0.00</td> </tr> <tr> <td colspan="3"></td> <td>Amount to be charged:</td> <td>\$0.00</td> </tr> </table>									Amount to be refunded:	\$0.00				Amount to be charged:	\$0.00																																																																																																																																																																																
			Amount to be refunded:	\$0.00																																																																																																																																																																																											
			Amount to be charged:	\$0.00																																																																																																																																																																																											

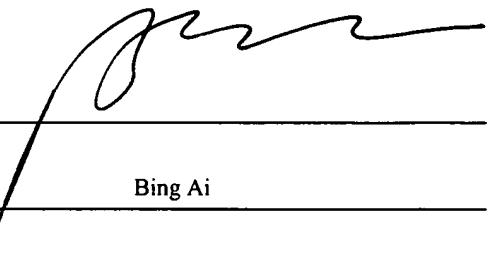
10/558842
IAP9 Rec'd PCT/PTO 29 NOV 2005
SUBSTITUTE PTO-1390

- a. A check in the amount of \$400.00 to cover the above fees is enclosed.
- b. Please charge my Deposit Account No. 06-1050 in the amount of \$0.00 to cover the above fees.
A duplicate copy of this sheet is enclosed.
- c. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 06-1050. A duplicate copy of this sheet is enclosed.
- d. Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. **Credit card information should not be included on this form.** Provide credit card information and authorization on PTO-2038.

NOTE: Where an appropriate time limit under 37 C.F.R. 1.495 has not been met, a petition to revive (37 C.F.R. 1.137(a) or (b) must be filed and granted to restore the International Application to pending status.

SEND ALL CORRESPONDENCE TO:

PTO Customer No: 20985


SIGNATURE

Bing Ai

NAME

43,312

REGISTRATION NUMBER

10/558842

Attorney's Docket No.: 15670-029US1 / SD2003-252

IAP9 Rec'd PCT/PTO 29 NOV 2005

APPLICATION
FOR
UNITED STATES LETTERS PATENT

TITLE: CIRCUIT NETWORK ANALYSIS USING ALGEBRAIC
MULTIGRID APPROACH

APPLICANT: CHUNG-KUAN CHENG AND ZHENGYONG ZHU

CERTIFICATE OF MAILING BY EXPRESS MAIL

Express Mail Label No. EV471534826US

November 29, 2005

Date of Deposit